

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION.

Miscellaneous Publication.

September, 1916.

APPLIED KNOWLEDGE AS A PROBLEM
IN NEGRO EDUCATION.¹

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INITIATIVE.

A boy purposes to make a piece of home-made apparatus. I watch him gather the materials. He has to use a thin piece of wood and is required to drive brads close to the edge. The piece of wood which he has selected splits very easily. I give him several pieces of wood of various kinds, including the one which he selected, and ask him to drive brads near the edges of each. He discovers that there is one piece which does not split, while the piece which he had selected splits very easily. A question mark shoots up in the boy's mind, and when he himself has answered it a certain number of times he discovers the idea of relative value of materials. Later on he discovers the relative value of ideas and feelings.

When a boy begins to put things together he oftentimes gets the cart before the horse. A little practice under guidance makes him discover that everything goes much better when the horse is in front. Another question mark shoots up in his mind. When he has answered it for himself a number of times he discovers the idea of organization of materials; later on, of ideas and feelings.

A boy once said to me, "Isn't it too bad I have all my materials except a piece of cotton string. There is none in the laboratory. I must lose this laboratory hour." I told that boy this story: When I was traveling in Africa we came to a clear stream of water and we were all thirsty. It was not safe to put one's mouth down and drink directly from the stream, for there were little animals in it that would ruin one's body if they once got into it. I had a filter, such as the English soldiers use in the Tropics. I put the filter down into the stream and drank with safety. But the natives had no filters and they had no cups, and I wondered how they would drink. They went off, one by one, into the bush and came back each folding a

¹ Adapted from an address before the Teachers' Institute of the Colored Teachers of the District of Columbia, Miner Normal School, Nov. 18, 1915, Washington, D. C.

large leaf into the shape of a cup. They dipped these down into the stream, lifted them full, examined the water closely with their eyes, and then drank. That boy looked at me with a puzzled expression on his face, scratched his head a little, walked around the laboratory, found some tissue paper, picked up a piece, tore off a strip, twisted it in his hands, and used it instead of the cotton string. A question mark shot up in that boy's mind, and after he had answered it a few times he got a better understanding of initiative for himself than all the books could possibly have given him.

IS KNOWLEDGE POWER?

The steam engine is one of the principal factors in the development of civilization, since it runs the myriad machines which man has invented to perform the mechanical work of the world. Coal is another principal factor in the development of civilization. The engine runs machines; what part does the coal play? It furnishes heat, some one says. But an ordinary piece of coal is not even warm. Take a whole scuttleful of coal and hold your hands over it. There is no heat. Coal in this state does not furnish heat. In fact, mere coal is of very little use to man. It is not good building material. It will not even make a good roadbed. A pile of it as large as a house, kept at the mines, might remain there to the end of time without rendering any service to civilization. The matter is not improved any if we haul the coal from the mines and pile it up in the coal yards, nor if we haul it from the coal yards and pile it up in the cellars of our houses. We get a great many valuable substances as well as heat from coal, but it must be changed; it must be converted; it must be transformed.

In general, it is essentially true that, to serve man, forces and substances must be transformed. We transform the potential energy of the coal into heat in the furnace; we send this heat into the steam engine and transform it into motion. Should we send this motion into a dynamo, it would be transformed into electricity. Should we send this electricity into a motor, it would be transformed into motion. Should we send this electricity into an electric flatiron, it would be transformed into heat. Given the flowing water of Niagara Falls, man can get any other form of energy desired.

Knowledge in itself is not of any more service than a piece of coal. Like a pile of coal unconverted at the mines, a pile of knowledge unconverted in a man's head renders little service to civilization. And just as the transfer of coal from the mines to the cellar does not increase its service to man, so also the transfer of knowledge from the teacher's head to the head of his pupil, through the latter's memory, does not increase its service to man.

There is a half-true statement which has carried many of our people wrong, and that is the statement that "Knowledge is power."

Knowledge is not power any more than coal is heat. Knowledge is not power any more than flax is linen. Knowledge is not power any more than the crude sap of the rubber vine is a rubber automobile tire. Knowledge is no more power than egg is protein.

We may not acknowledge this, but we nevertheless act upon it in everyday affairs. If we are told that Mr. Jackson, who has just graduated with high honors from a school of navigation, has acquired all the knowledge pertaining to navigation furnished by this school, there is not one of us who would take passage on an ocean liner where Mr. Jackson alone and for the first time is going to act as navigation officer. A young man comes out of a medical school. He carries off prizes in the medical school. He knows all that is taught in that medical school about medicine; has it at his finger tips, so to speak. But if you are dangerously ill, critically ill, you are not going to call in this young man simply because he has this knowledge which the school furnishes. Nor will any of us, after memorizing a book on swimming, jump overboard depending upon this knowledge to swim ashore.

It reduces to this: *Knowledge to serve man and civilization must be converted into the ability to do, and this conversion is accomplished by applying knowledge.*

A century ago man knew just as much about electricity as he does to-day. For the past 50 or 60 years men have not been concerned so much with the question of what electricity is, as how to apply the knowledge of the effects which it is known electricity will produce. Hence man to-day has the ability to light and warm houses by electricity; to run cars, boats, carriages by electricity; to silver-plate the coffee service by electricity; to take messages from house to house, from State to State, from country to country, by electricity.

VOCATIONAL TRAINING.

The Germans are an efficient people. They, of all people, have emphasized and exemplified in education the reciprocal relation of mind and body. Every nation has gone to Germany for scholarship, and every nation, before the war, was going to Germany to study the educational system which produces such efficiency—this ability to do. The Germans assert that the conversion of knowledge into ability to do is one of the foundation stones upon which they have erected their wonderful system of vocational education—an education which will secure to the boy vigorous health of body and mind and the ability to perform the work of his chosen vocation expertly. For instance, a boy selects for his life work the vocation of a barber. What, you say, train to become a barber? Why, our youth just pick this trade up! Yes; and our youth just drop it down at the first attack of trained competition. The course of study which the Ger-

man boy pursues makes the work of a barber the center, and concentrates upon it that part of knowledge in the various fields of knowledge which is applicable to any and all of the phases of the barber's work, the commercial and health sides as well. Visit a class of these boys: In the science laboratory you would suspect them to be embryo scientists; in the art room, embryo artists; in the medical laboratory, embryo physicians; in the hair laboratory, embryo wig-makers; in the commercial room, embryo business men; in the civics room, embryo public men; in the commercial-law room, embryo lawyers; and the same in other subjects—mathematics, modern language, etc. These boys are ever conscious of the fact that they are gathering knowledge with the purpose to apply it, and their teachers—university men—are imparting the knowledge with the same purpose in view. The result is that the boys are constantly seeking after knowledge, and they go on seeking for it after school days, both in vocation and in avocation.

The idea that vocational education seeks simply the mechanical development of skill to perform manual work puts a very low estimate on this important type of education. The chief aim is not to make the boy capable of earning a living, but to furnish the boy opportunities to apply knowledge, because out of that application comes the ability to do. As Thomas W. Churchill, president of the New York City Board of Education, declares:

The fundamental purpose of the real power behind the schools, the American community, is to produce an American citizen, intelligent, self-reliant, given to the exercise of judgment before action, prone to cooperation with his fellows, and disposed toward substituting for a narrow greed and selfishness a generous public-mindedness.

To make a citizen intelligent we can not continue mulling over the things that were essential for the cultured English gentleman, but are not essential for the American citizen of 1915. The discovery of coal, the utilization of steam, the expansion of trade, the introduction of popular government, the cheapening of printing, the use of newspapers and magazines have made a new civilization. The schoolmaster may not like it; I may not like it; but it is here, and our children have got to live in it until they change it. They will not live in a civilization that used to be when our present curriculum was developed. This change means that the intelligence needed by the school citizen is not the intelligence contemplated by the school curriculum. The intelligence demanded is not a literary intelligence. The continuation of our bookish, literary-centered course of study is therefore absurd, unfair, and an irreparable damage to those on whom it is imposed.

Hon. William C. Redfield, Secretary of Commerce, and president of the National Society for the Promotion of Industrial Education, said in one of his speeches in the interest of business:

Give me 1,000 boys between the ages of 18 and 25 years, who have had three years of training under competent skilled instructors in the art of being a machinist, and I can outdistance any factory in the United States.

The reason is there is not a plant in this country which has such a force. Not one boy in a thousand who applies to a mill foreman for work has learned in school how to operate a drill, or planer, or lathe, or milling machine. Foremen must pick untrained men to do these tasks.

The day of efficiency is here. The demand is for an education which develops a God-fearing man who has applied knowledge of himself and knowledge of an occupation in a manner to develop in him the ability to do the work of a man and the work of that occupation sincerely and expertly.

THE COLORED RACES.

A word about Japan. For every Japanese whom I saw going into the University of Berlin I saw 10 others going into the polytechnic school at Charlottenburg. The great majority of Japanese youth who came to the western world to learn its civilization went to schools and other institutions where knowledge is applied. They were not in search of knowledge for knowledge sake. Least of all did they wish to adopt for Japan a civilization which had been developed by another people. What they sought was the ability to do the things of the western civilization which would serve best in the development of an up-to-date Japanese civilization. It is therefore not surprising that this colored race has risen within a half century to its place with the first nations of the world.

We have three black Republics—Haiti, Santo Domingo, and Liberia. I lived in Liberia 18 months as a professor in Liberia College. After a few months' study of the situation I recommended that the money spent on the college be spent for a system of industrial education, making the prophecy at the time that unless a change from a gentleman's curriculum to a workingman's curriculum be made the country would be in the hands of the white man within 50 years. To-day an English company holds the concession to collect the rubber and ivory of the country and a white American is "sitting at the receipt of custom," and it is still a long, long way from 50 years. Liberia began with a college. Teachers, books, course of study, building materials, mechanics to erect the building, all were imported. The two profoundest scholars so far produced by our race lived and worked in Liberia. When I was there there was not one public school. I was not able to find one article manufactured in the Republic, and not even a wagon road. The country exported only wildy grown raw materials, and seven-tenths of this trade was in the hands of white men. It is said that the best coffee on earth grows wild in Liberia, yet there was not one coffee plantation, and the nearest approach to what might be called a coffee farm was that worked by a Dutchman who had married a Liberian woman. Liberia, the garden spot of west Africa, as it is called, imported practi-

cally all she ate—even vegetables. There was not a truck garden in the whole Republic.

Reports from Santo Domingo do not dwell on the Santo Dominican's ability to do mining, agriculture, manufacturing, skilled mechanical work, and other basic activities of civilization—and a white American is sitting at the receipt of custom there.

Haiti's records show practically the same absence of achievement on the side of economical development as Santo Domingo's. When the United States sized up Haiti's military activities, it was discovered that the ability to do military and constabulary work necessary at present in Haiti is the ability possessed by a United States sergeant of marines; and to-day one of our sergeants of marines runs the military affairs of the country—and a white American is sitting at the receipt of customs.

Let any reason whatever be assigned for the present condition of these countries, the fact remains that they are most seriously handicapped by the astounding lack of ability to carry on ordinary economic activities. The supreme need of all three is a system of education which will develop this ability.

Let us come nearer home than these Republics. In this country the Negroes are an unskilled people. They are not the preferred workers in any field of endeavor, not even in those into which they are freely admitted. What the Negro needs to be able to compete in the struggle for existence in this country, and in the rest of the world, is not knowledge, but the ability to do, the ability to achieve. A curriculum planned to furnish only knowledge spells disaster. The curriculum must go further—it must provide opportunities to apply knowledge. Education must aim to produce the character which results from a sound body, a sound mind, a clean heart, and a skilled hand.

Vocational training is valuable for all peoples—for the Negro under present conditions it is imperative. It will make our young people better and more efficient men and women and adjust them best to their present state in the terrific struggle for existence. If our children are trained for power, power of mind, of heart, of body, rather than for mere knowledge, our race will rapidly rid itself of that most undesirable of all young men—the graduate whose mind is not on speaking terms with his body.



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